

## **VAPOR RECOVERY SYSTEM WITH IMPROVED ORVR COMPATIBILITY AND PERFORMANCE**

### **Abstract of the Disclosure**

A fueling and associated vapor recovery system maintains the same, or lower, vacuum level in the vapor hose during ORVR vehicle refueling as that seen during a non-ORVR refueling. A valve assembly is made as either a part of the end of the vapor recovery hose assembly, a separate unit that is placed between the hose assembly and the nozzle, or incorporated directly into the nozzle. The valve assembly includes a diaphragm biased to one position by a spring to which is attached a sliding valve member. The force of the spring on the diaphragm is sufficient to keep the valve member in the original position when refueling non-ORVR vehicles so that the vapor hose is unobstructed and an air bleed hole is closed. When refueling an ORVR vehicle, the elevated vacuum level moves the diaphragm and valve member to a second position which blocks off the vapor hose from the vacuum pump and opens up the vapor hose to the air bleed hole.